

Notice of Allowability

Application No.

10/636,129

Examiner

Rebecca L. Anderson

Applicant(s)

FUCHS ET AL.

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicants' amendment filed 19 May 2006.
2. ☒ The allowed claim(s) is/are 1, 3-8, 22 and 32-34, now renumbered as claims 1-11.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/21, 2/28/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Claims 1, 3-8, 22 and 32-34 are currently pending in the instant application, appear allowable over the prior art of record and have been renumbered as claims 1-11.

EXAMINER'S AMENDMENT

Applicants' amendment filed 19 May 2006 is considered non-compliant according to 37 CFR 1.121. Specifically, claim 1 has subject matter added without the proper markings, i.e. underlining and claims 2, 9-21 and 23-31, which have been cancelled have improper status identifiers as the term "cancelled" is not in parenthesis. This non-compliance is corrected with the following examiner's amendment. Additionally, a period is added to the end of claim 1.

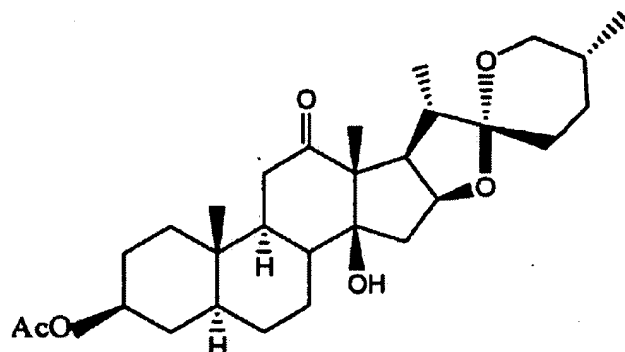
An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

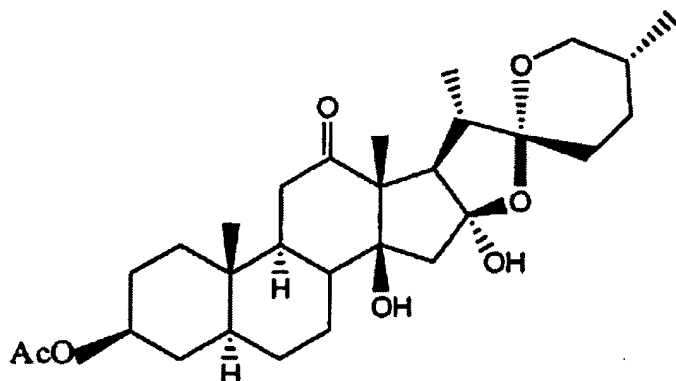
1. Amend claim 1 by adding the underlining to show addition of subject matter and additionally to add a period to the claim such that amended claim 1 is as follows:

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1. (Currently amended) A method of oxidizing a hydrocarbon according to the chemical structure:



comprising reacting the hydrocarbon in an anhydrous solvent with a chromium [VI] oxidant and a co-oxidant at a reaction temperature of between about -50°C to about 0°C, thereby catalytically and chemospecifically oxidizing the hydrocarbon: (i) substantially stereospecifically at a tertiary carbon to form a ~~tertiary alcohol or hemiacetal~~, or (ii) ~~at a one or more secondary carbons to form a ketone or dione~~, or (iii) ~~at cis tertiary CH groups to form a ring cleaved dione~~. according to the structure:



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wherein the chromium [VI] oxidant is selected from the group consisting of CrO₃, chromoyl diacetate, chromoyl chloride, chromoyl bistrifluoroacetate, chromoyl bistriflate, and chromoyl bis t-butylester, the co-oxidant is selected from the group consisting of periodic acid, tetrabutylammonium periodate, hydrogen peroxide, t-butyl hydroperoxide, diacyl peroxides, TMSOOTMS, peroxydisulfate and persulfate, and the solvent is selected from the group consisting of acetic acid, acetonitrile, methylene chloride and mixtures, thereof.

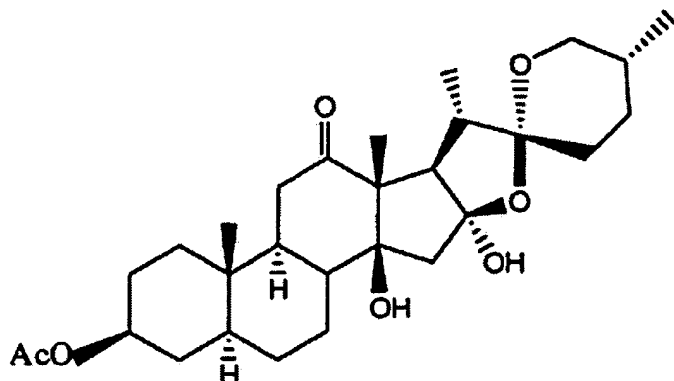
2. Amend the status identifiers for claim 2, 9-21 and 23-31 from "Cancelled" to "(Cancelled)".

Response to Amendment and Arguments

Applicant's amendment and arguments have overcome the objection to the claims and the 35 USC 112 1st paragraph rejection of the claims. As applicants' have amended the claims to the elected invention, the 35 USC 102 rejection of non-elected subject matter has been rendered moot. Applicants' arguments, see the remarks filed 19 May 2006 with respect to the 35 USC 112 1st paragraph rejection have been fully considered and are persuasive. The 35 USC 112 1st paragraph rejection of claims 1-10, 12, 22 and 23 has been withdrawn as the invention of producing the hemiacetal is enabled as the hemiacetal which is produced, can be modified (in a number of steps) to product cephalostatins and/or ritterzines, see page 8 of applicants' arguments and LaCour et al. (J. Am. Chem. Soc. 1998, 120, 692-707) which provides the synthesis of Cephalostatin 1, the north hemisphere of Ritterazine G, and Ritterostatin GN1N1.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance. This invention relates to the process for preparing



. The closest prior art of record, Yamazaki et al., which discloses the process of oxidizing arenes to the corresponding quinones (i.e. one or more secondary carbons form a ketone or dione), wherein the process is disclosed in the reaction at the bottom of page 3355 and on page 3357 wherein H₅IO₆ (periodic acid, a co-oxidant) is dissolved in acetonitrile (an anhydrous solvent) with vigorous stirring, and then CrO₃ (a chromium [VI] oxidant) was dissolved to the solution, and the resulted solution was cooled to 5 degrees Celsius (about 0 degrees Celsius), and 2-methylnaphthalene (a hydrocarbon, substituted, non-hetero, aromatic, bicyclic compound containing one or more alkyl and aryl groups) dissolved in acetonitrile (an anhydrous solvent) was added all at once to the above solution with stirring, fails to teach or suggest applicants' instantly claimed process of preparation.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rebecca L. Anderson whose telephone number is (571) 272-0696. Mrs. Anderson can normally be reached Monday through Friday 5:30AM to 2:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Joseph K. McKane, can be reached at (571) 272-0699.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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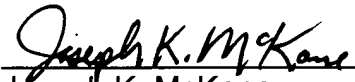
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



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7/28/06



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